

**REGION VIII  
DATA VALIDATION REPORT  
ORGANICS**

Case No. / TDD No.	Site Name		Operable Unit
38043 / 0811-02	5600 S. 900 E. Plume		NA
RPM/OSC Name			
Gwen Christiansen			
Contractor Laboratory	Contract No.	SDG No.	Laboratory DPO/Region
A4 Scientific, Inc.	EPW05036	H1YP7	8

Review Assigned Date: January 28, 2009Data Validator: Amy GrayReview Completion Date: February 02, 2009Report Reviewer: Kent Alexander

Sample ID	Matrix	Analysis
H1YP7	Soil	CLP - Low Volatile Analysis by SOM01.2
H1YP8		

## DATA QUALITY STATEMENT

- ( ) Data are ACCEPTABLE according to EPA Functional Guidelines with no qualifiers (flags) added by the reviewer.
- ( ) Data are UNACCEPTABLE according to EPA Functional Guidelines.
- ( X ) Data are acceptable with QUALIFICATIONS noted in review.

PO Attention Required? Yes \_\_\_\_\_ No  X  If yes, list the items that require attention:

**ORGANIC DATA VALIDATION REPORT****REVIEW NARRATIVE SUMMARY**

This data package was reviewed according to the EPA document "USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review," June, 2008.

Raw data were reviewed for completeness and transcription accuracy onto the summary forms. Approximately 10-20% of the results reported in each of the samples, calibrations, and QC analyses were recalculated and verified. If problems were identified during the recalculation of results, a more thorough calculation check was performed.

The data package, SDG No. H1YP7, consisted of two soil samples for low level volatile organic compounds.

Sample Number	Volatile Compound	Qualifier	Reason For Qualification	Review Section
H1YP7 H1YP8	Methylene Chloride	U / J	Blank Contamination	8

**1. DELIVERABLES**

All deliverables were present.

VOA: Yes X No     

Comments: None.

**2. HOLDING TIMES AND PRESERVATION CRITERIA**

All holding times and preservation criteria were met.

VOA: Yes X No     

Comments: None.

**3. BFB PERFORMANCE RESULTS**

The bromofluorobenzene (BFB) performance results were within the specified control limits. All appropriate BFB results were included.

VOA: Yes X No     

Comments: A BFB and two opening CCV's were utilized to ensure performance.

**4. INSTRUMENT CALIBRATIONS: INITIAL AND CONTINUING STANDARDS**

Initial instrument calibrations were performed according to method requirements and met the specified control limits.

VOA: Yes X No     

Comments: None.

Continuing instrument calibrations were performed according to method requirements and met specified control limits.

VOA: Yes      No X

Comments: C-CAL 1 (VSTD05061) had a % Difference for bromomethane of -28.3%, which is greater than the limit of  $\leq \pm 25\%$ . No qualifiers were added because the lab had already given both samples a "U" qualifier for bromomethane.

**5. SURROGATE COMPOUND RECOVERY**

Surrogate compound recovery analysis was performed according to method requirements and results met specified control limits.

VOA: Yes X No     

Comments: There was a rounding error reported for 1,2-Dichlorethane-d4 (DCA) on Form II for sample number H1YP7. The percent recovery was reported as 91, but was actually 92.

**6. MATRIX SPIKE/MATRIX SPIKE DUPLICATE**

Matrix Spike/Matrix Spike Duplicate (MS/MSD) and blank spike/blank spike duplicate (BS/BSD) analyses were performed according to method requirements and results met recovery and precision limits.

VOA: Yes X No     

Comments: None

**7. INTERNAL STANDARD AREA**

Internal standard area analysis was performed according to method requirements and results met specified control limits.

VOA: Yes X No     

Comments: None

**8. LABORATORY BLANK ANALYSIS RESULTS**

The laboratory blank analysis was performed according to method requirements and results met specified limits.

VOA: Yes      No X

Comments: The following table lists contaminants, their corresponding concentration found in the blanks and qualifiers added to the data.

## Blank Target Compounds

Blank ID	Contaminant	Concentration Found in Blank (ug/Kg)	Associated Samples	Concentration Found in Sample (ug/Kg)	Qualifier/Adjustment
VBLK61	Methylene Chloride	2.2	H1YP7	13	J
VHBLK01		5.6	H1YP8	9.3	U

### 9. SAMPLE RESULTS

The sample results were reviewed and all compound identifications were acceptable and met contract requirements.

VOA: Yes X No     

Comments: None.

### 10. Additional Comments or Problems/Resolutions Not Addressed Above

VOA: Yes      No X

Comments: None.

**ORGANIC DATA QUALITY ASSURANCE REVIEW****Region VIII****DATA QUALIFIER DEFINITIONS**

For the purpose of Data Validation, the following code letters and associated definitions are provided for use by the data validator to summarize the data quality.

**GENERAL QUALIFIERS for use with both INORGANIC and ORGANIC DATA**

- R - Reported value is "rejected." Resampling or reanalysis may be necessary to verify the presence or absence of the compound.
- J - The associated numerical value is an estimated quantity because the Quality Control criteria were not met.
- U J - The reported quantitation limit is estimated because Quality Control criteria were not met. Element or compound was not detected.
- N J - Estimated value of a tentatively identified compound. (Identified with a CAS number.) ORGANICS analysis only.
- U - The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.

1A - FORM I VOA-1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

HIYP7

Lab Name: A4 SCIENTIFIC, INC. Contract: EPW05036  
Lab Code: A4 Case No.: 33043 Mod. Ref No.: SDG No.: HIYP7  
Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 0009776-01  
Sample wt/vol: 4.88 (g/mL) g Lab File ID: C6311.D  
Level: (TRACE/LOW/MED) LOW Date Received: 12/04/2008  
% Moisture: not dec. 28.4 Date Analyzed: 12/08/2008  
GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)  
Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg)ug/kg	Q
75-71-8	Dichlorodifluoromethane	7.2	U
74-87-3	Chloromethane	7.2	U
75-01-4	Vinyl chloride	7.2	U
74-83-9	Bromomethane	7.2	U
75-00-3	Chloroethane	7.2	U
75-69-4	Trichlorofluoromethane	7.2	U
75-35-4	1,1-Dichloroethene	7.2	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	7.2	U
67-64-1	Acetone	73	
75-15-0	Carbon disulfide	7.2	U
79-20-9	Methyl acetate	7.2	U
75-09-2	Methylene chloride	13	B
156-60-5	trans-1,2-Dichloroethene	7.2	U
1634-04-4	Methyl tert-butyl ether	7.2	U
75-34-3	1,1-Dichloroethane	7.2	U
156-59-2	cis-1,2-Dichloroethene	7.2	U
78-93-3	2-Butanone	14	U
74-97-5	Bromochloromethane	7.2	U
67-66-3	Chloroform	7.2	U
71-55-6	1,1,1-Trichloroethane	7.2	U
110-82-7	Cyclohexane	7.2	U
56-23-5	Carbon tetrachloride	7.2	U
71-43-2	Benzene	7.2	U
107-06-2	1,2-Dichloroethane	7.2	U
123-91-1	1,4-Dioxane	140	U

ALL 02-02-09  
→ J

Report 1,4-Dioxane for Low-Medium VOA analysis only

ALL  
02-02-09



1B - FORM I VOA-2  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

H1YP7

Lab Name: A4 SCIENTIFIC, INC. Contract: EPW05036  
Lab Code: A4 Case No.: 38043 Mod. Ref No.: SDG No.: H1YP7  
Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 0009776-01  
Sample wt/vol: 4.83 (g/mL) g Lab File ID: C6311.D  
Level: (TRACE/LOW/MED) LOW Date Received: 12/04/2008  
% Moisture: not dec. 28.4 Date Analyzed: 12/08/2008  
GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)  
Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg)ug/kg	Q
79-01-6	Trichloroethene	7.2	U
108-87-2	Methylcyclohexane	7.2	U
78-87-5	1,2-Dichloropropane	7.2	U
75-27-4	Bromodichloromethane	7.2	U
10061-01-5	cis-1,3-Dichloropropene	7.2	U
108-10-1	4-Methyl-2-pentanone	14	U
108-88-3	Toluene	0.36	J
10061-02-6	trans-1,3-Dichloropropene	7.2	U
79-00-5	1,1,2-Trichloroethane	7.2	U
127-18-4	Tetrachloroethene	7.2	U
591-78-6	2-Hexanone	14	U
124-48-1	Dibromochloromethane	7.2	U
106-93-4	1,2-Dibromoethane	7.2	U
108-90-7	Chlorobenzene	7.2	U
100-41-4	Ethylbenzene	7.2	U
179601-23-1	m,p-Xylene	7.2	U
95-47-6	o-Xylene	7.2	U
100-42-5	Styrene	7.2	U
75-25-2	Bromoform	7.2	U
98-82-8	Isopropylbenzene	7.2	U
79-34-5	1,1,2,2-Tetrachloroethane	7.2	U
541-73-1	1,3-Dichlorobenzene	7.2	U
106-46-7	1,4-Dichlorobenzene	7.2	U
95-50-1	1,2-Dichlorobenzene	7.2	U
96-12-8	1,2-Dibromo-3-chloropropane	7.2	U
120-82-1	1,2,4-Trichlorobenzene	7.2	U
87-61-6	1,2,3-Trichlorobenzene	7.2	U

AKG  
02-02-09

1J - FORM I VOA-TIC  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

H1YP7

Lab Name: A4 SCIENTIFIC, INC. Contract: EPW05036  
Lab Code: A4 Case No.: 38043 Mod. Ref No.:          SDG No.: H1YP7  
Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 0009776-01  
Sample wt/vol: 4.88 (g/mL) g Lab File ID: C6311.D  
Level: (TRACE or LOW/MED) LOW Date Received: 12/04/2008  
% Moisture: not dec. 28.4 Date Analyzed: 12/08/2008  
GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
Soil Extract Volume:          (uL) Soil Aliquot Volume:          (uL)  
CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg Purge Volume: 10.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01					
02					
03					
04					
05					
06					
07					
08					
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11					
12					
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25					
26					
27					
28					
29					
30					
	E966796 <sup>1</sup>	Total Alkanes	N/A		

<sup>1</sup>EPA-designated Registry Number.

AUG  
02-02-09

1A - FORM I VOA-1  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

H1YP3

Lab Name: A4 SCIENTIFIC, INC. Contract: EPW05036  
Lab Code: A4 Case No.: 38043 Mod. Ref No.:          SDG No.: H1YP7  
Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 0009776-02  
Sample wt/vol: 4.94 (g/mL) g Lab File ID: C6312.D  
Level: (TRACE/LOW/MED) LOW Date Received: 12/04/2008  
% Moisture: not dec. 16.2 Date Analyzed: 12/08/2008  
GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
Soil Extract Volume:          (uL) Soil Aliquot Volume:          (uL)  
Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) <u>ug/kg</u>	Q
75-71-8	Dichlorodifluoromethane	6.0	U
74-87-3	Chloromethane	6.0	U
75-01-4	Vinyl chloride	6.0	U
74-83-9	Bromomethane	6.0	U
75-00-3	Chloroethane	6.0	U
75-69-4	Trichlorofluoromethane	6.0	U
75-35-4	1,1-Dichloroethene	6.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	6.0	U
67-64-1	Acetone	12	U
75-15-0	Carbon disulfide	6.0	U
79-20-9	Methyl acetate	6.0	U
75-09-2	Methylene chloride	9.3	B → U
156-60-5	trans-1,2-Dichloroethene	6.0	U
1634-04-4	Methyl tert-butyl ether	6.0	U
75-34-3	1,1-Dichloroethane	6.0	U
156-59-2	cis-1,2-Dichloroethene	6.0	U
78-93-3	2-Butanone	12	U
74-97-5	Bromochloromethane	6.0	U
67-66-3	Chloroform	6.0	U
71-55-6	1,1,1-Trichloroethane	6.0	U
110-82-7	Cyclohexane	6.0	U
56-23-5	Carbon tetrachloride	6.0	U
71-43-2	Benzene	6.0	U
107-06-2	1,2-Dichloroethane	6.0	U
123-91-1	1,4-Dioxane	120	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

*AKB*  
*02-02-09*

1B - FORM I VOA-2  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

H1YP8

Lab Name: A4 SCIENTIFIC, INC. Contract: EPW05036  
Lab Code: A4 Case No.: 38043 Mod. Ref No.:            SDG No.: H1YP7  
Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 0009776-02  
Sample wt/vol: 4.94 (g/mL) g Lab File ID: C6312.D  
Level: (TRACE/LOW/MED) LOW Date Received: 12/04/2008  
% Moisture: not dec. 16.2 Date Analyzed: 12/08/2008  
GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
Soil Extract Volume:            (uL) Soil Aliquot Volume:            (uL)  
Purge Volume: 10.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) <u>ug/kg</u>	Q
79-01-6	Trichloroethene	6.0	U
108-87-2	Methylcyclohexane	6.0	U
78-87-5	1,2-Dichloropropane	6.0	U
75-27-4	Bromodichloromethane	6.0	U
10061-01-5	cis-1,3-Dichloropropene	6.0	U
108-10-1	4-Methyl-2-pentanone	12	U
108-88-3	Toluene	6.0	U
10061-02-6	trans-1,3-Dichloropropene	6.0	U
79-00-5	1,1,2-Trichloroethane	6.0	U
127-18-4	Tetrachloroethene	6.0	U
591-78-6	2-Hexanone	12	U
124-48-1	Dibromochloromethane	6.0	U
106-93-4	1,2-Dibromoethane	6.0	U
108-90-7	Chlorobenzene	6.0	U
100-41-4	Ethylbenzene	6.0	U
179601-23-1	m,p-Xylene	6.0	U
95-47-6	o-Xylene	6.0	U
100-42-5	Styrene	6.0	U
75-25-2	Bromoform	6.0	U
98-82-8	Isopropylbenzene	6.0	U
79-34-5	1,1,2,2-Tetrachloroethane	6.0	U
541-73-1	1,3-Dichlorobenzene	6.0	U
106-46-7	1,4-Dichlorobenzene	6.0	U
95-50-1	1,2-Dichlorobenzene	6.0	U
96-12-8	1,2-Dibromo-3-chloropropane	6.0	U
120-82-1	1,2,4-Trichlorobenzene	6.0	U
87-61-6	1,2,3-Trichlorobenzene	6.0	U

*AKB*  
02-02-09

1J - FORM I VOA-TIC  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

H1YP8

Lab Name: A4 SCIENTIFIC, INC. Contract: EPW05036  
Lab Code: A4 Case No.: 38043 Mod. Ref No.:          SDG No.: H1YP7  
Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 0009776-02  
Sample wt/vol: 4.94 (g/mL) g Lab File ID: C6312.D  
Level: (TRACE or LOW/MED) LOW Date Received: 12/04/2008  
% Moisture: not dec. 16.2 Date Analyzed: 12/08/2008  
GC Column: DB-624 ID: 0.20 (mm) Dilution Factor: 1.0  
Soil Extract Volume:          (uL) Soil Aliquot Volume:          (uL)  
CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg Purge Volume: 10.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01					
02					
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	E966796 <sup>1</sup>	Total Alkanes	N/A		

<sup>1</sup>EPA-designated Registry Number.

*AUG*  
*02-02-09*